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IQAN Software Studios Software Tools

Electronic Control Systems

Parker

ENGINEERING YOUR SUCCESS.

Machine life cycle model

Having previously been a traditional purchase/sales component, today's control system involves the whole chain of a machine's life, known as its life-cycle cost. LCC plays an increasingly strong role in the end user's decision. It is no longer based on just the up-front product cost.

This puts new demands on the level of co-operation between suppliers and the OEM, on more than the traditional R&D level. Today, an OEM's production department wants to automate, log and trace the delivery status; the service department wants to handle warranties, offer proactive maintenance and download machine upgrades; and the machine owner wants a reliable machine with high productivity and low downtime. To meet all these demands, IQAN Software Studios were designed to fulfill the needs of the machine life cycle model.

The machine life cycle is divided into three phases; development, production and after sales.

Development

The OEM development team considers time to market as one of the most important factors for return on investment. Time to market is primarily set by design time, application programming, simulating, verifying and creating documentation. Finally, the machine is commissioned for production, where user friendly, high-capacity software is essential to meet these demands.

Production

The production department constantly strives for improved quality, simpler configuration, faster start-up and reduced production line set-up time, with the possibility to trace and record delivery status.

After sales

The after sales department wants a reliable machine with minimum downtime, simple maintenance, maximum field service support and the possibility of following up warranty issues.

Software tools

The IQAN software studios cover all phases of a machine's life cycle, from development through production to after sales. There are three different studios available; IQAN Creative Studio, IQAN Productive Studio and IQAN Active Studio.

IQAN Creative studio

IQAN Creative studio is a user-programmable software package for the R&D department. It includes tools for application development, simulation and initial setup.

- IQANdesign
- IQANsimulate
- IQANrun

IQAN Productive studio

IQAN Productive studio is a software package for the manufacturing and service departments. It includes development tools for customization and automation of production and maintenance processes.

- IQANscript
- IQANcustomize
- IQANsimulate
- IQANrun

IQAN Active studio

IQAN Active studio is a software package for service and production personnel. It includes tools for machine diagnostics, setup and simulation.

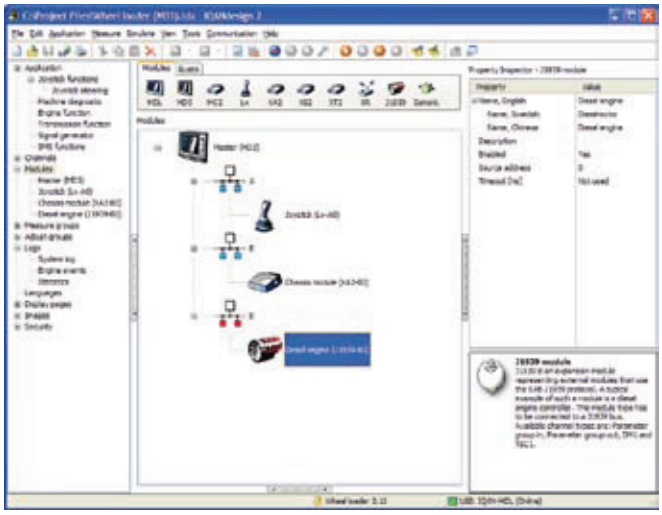
- IQANrun
- IQANsimulate

IQAN Creative Studio

The main philosophy behind the IQAN Creative Studio is that the OEM, with their extensive knowledge of their machine, should be able to write the desired machine functionality directly, without having programming experience.

IQANdesign

IQANdesign is a high level graphical design tool which simplifies application development for your mobile machine and reduces development time.



IQANdesign main window.

This tool is mainly used for system layout and machine function design. There is a wide range of predefined building blocks available, such as closed loop control, signal processing, math calculations, communication protocols (e.g. SAE J1939) and system diagnostics.

In addition to machine function design IQANdesign also provides a simple way to accomplish display page programming using a simple drag and drop interface. The menu system can be customized as well.

Integrated machine security access control allows you to grant appropriate access to production and service personnel during the application development process. IQANdesign also allows you to create all of the desired machine logging capabilities and methods for gathering statistics.

IQANdesign supports multiple languages within one application, even languages with symbol based alphabets, such as Chinese.

IQAN-MD3 master display with Chinese characters.

IQANsimulate

IQANsimulate is a simulation tool, which simplifies function test, validation and reduces development time. It simulates all of the hardware modules in an IQAN application. Software simulation is a safer way to test new applications than on an actual machine.

Simulation of all input values in your application is easy using the on screen slide bar interface. While simulating inputs you can simultaneously measure the resulting output values. Together with module and I/O error simulation you will be able to perform machine FMEA (Failure Modes and Effects Analysis).

The simulator will behave just like the “real thing”, meaning you will be able to look at your display pages, adjust parameters, view logs, test your user interface and much more.

IQANsimulate run mode.

IQANrun

During the development phase you can use IQANrun to optimize your machine’s performance with the help of IQANrun’s advanced graphical measure and machine statistics collection functions.

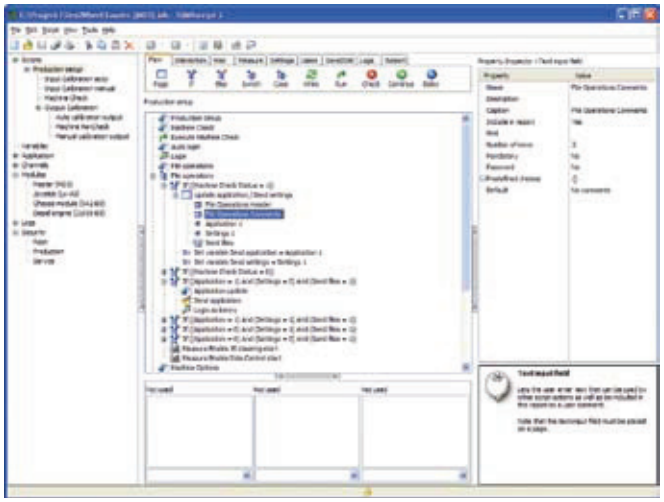
IQANrun also offers a convenient way of developing the basic machine settings during the prototyping phase.

IQAN Productive Studio - Script

The script concept was developed to help OEM production departments to create routines for testing, tuning, setting options, logging, delivery sheets, etc. The service department can also take advantage of scripts to create tailor-made fault-finding trees, service procedures, intervals and much more.

IQANscript

With IQANscript you create scripts using simple drag and drop operations. Each script is a sequence of actions that can be executed in IQANrun. A wide range of script actions are available to build scripts for different purposes.



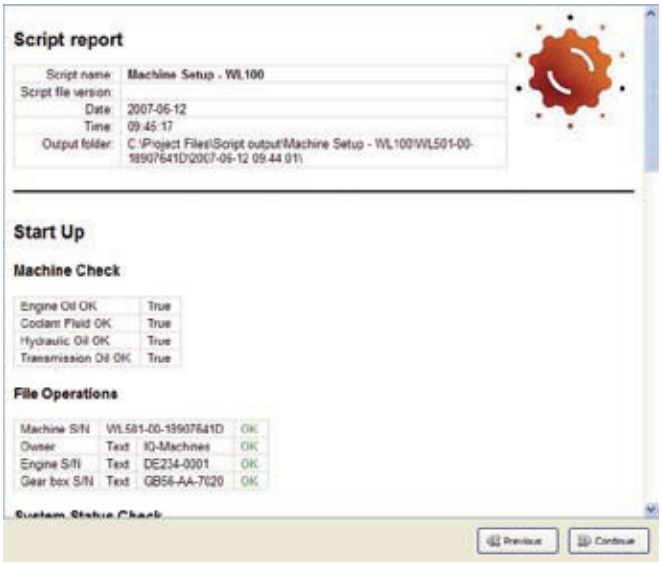
IQANscript main window.

Using flow control actions such as conditions and loops you can control how the script is executed. With the different measure and log actions, information can be retrieved from the master units to be analyzed by the script or displayed to the user.

Setting actions provide full control of the master settings, making it possible to fine tune the machine using a script.

IQANscript provides powerful building blocks for the script user interface. Using formatted text and images the script user is guided through otherwise complex operations. Input from the user can also be collected and used by the script.

To provide traceability you can include a customized report in the script. When the script is executed the results will be recorded in the report, making it possible to get a good overview as well as saving the report for future use.



Script report.

Script examples

IQANscript allows you to design machine startups with secured and standardized procedures. This increases manufacturing productivity and initial machine quality.

Using IQANscript you can also control your service procedures. This increases field service integrity and long term machine quality. IQANscript can control equipment service schedules through inspection and error log's.

By creating troubleshooting scripts you can guide service personnel during the fault finding process. This decreases the fault finding time and makes it possible for less trained personnel to find problems that otherwise would require expert knowledge.

IQANrun

During the script design phase you can use IQANrun to execute scripts. This allows you to debug and optimize them.

When using IQANrun for debugging scripts, extra debug information is available. This makes it possible to trace the flow of the script while it is executed to find problems in the script design.

IQANsimulate

IQANsimulate can be used instead of a "real" master module when debugging your scripts before sending them to the production floor or field.

IQAN Productive Studio - Customize

Today, service technicians have a large number of tools and documents to keep track of. Sometimes, it is hard for them to find the right information and to be sure they use the correct version of a software or document.

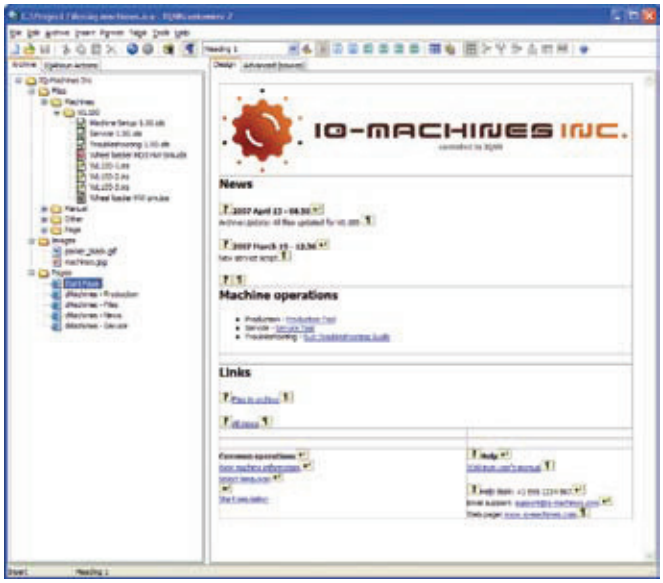
The customize feature in IQAN Productive Studio was developed to solve this problem. It allows you to collect all machine software and information in one user interface and to distribute it to your users quickly and easily via the web.

IQANcustomize

IQANcustomize is a tool that enables customization of the IQANrun software functions and appearance to create a unique service and production tool. This is done by creating one or more pages using the graphical page editor in IQANcustomize. The editor is fully HTML compatible.

The pages can contain specific information for each machine type and will be displayed when IQANrun is started. Your company logo, graphics, links and information may all be integrated in the user interface of IQANrun. Using IQANcustomize you can also show or hide IQANrun functions, or make them available as links on any page, to assist users through a troubleshooting or tuning process.

IQANcustomize has a built-in function that allows you to upload changes to your company update server. This way you can easily distribute information, the latest version of manuals, applications and other files to a large number of users.



IQANcustomize main window.

Archive examples

An archive is where IQANcustomize stores all information used in the customized IQANrun. It can contain anything from machine application and settings to instructions and manuals.

Start page in IQANrun using an archive.

Production archive

Production procedures, machine setup scripts, application and setting files, pre-delivery inspection scripts.

Service archive

Service manuals, service instructions and scripts, fault finding guides.

Machine owner archive

Machine documentation, manuals, videos, machine productivity and fuel consumption measurement.

IQANrun

During the archive design phase you will use IQANrun to view and optimize the user interface of your archive pages.

IQANsimulate

With the help of IQANsimulate you can easily test your archive before uploading them to the field.

IQAN Active Studio

Getting a machine design into production is time consuming. Testing equipment and procedures have to be developed and machine start-up and delivery status have to be recorded. Fortunately, IQANrun is tailor-made to fulfill all of these demands. IQANrun may also be used by the service department and can be adapted to feature machine-specific procedures for maintenance, fault finding and web supported machine upgrades, while the machine owner can access spare parts manuals, maintenance videos, service intervals and service suggestions via IQANrun.

IQANrun

IQANrun software is a user-friendly service, production and machine owner tool which includes a powerful, graphical measure capability and simplifies machine tuning for increased productivity.

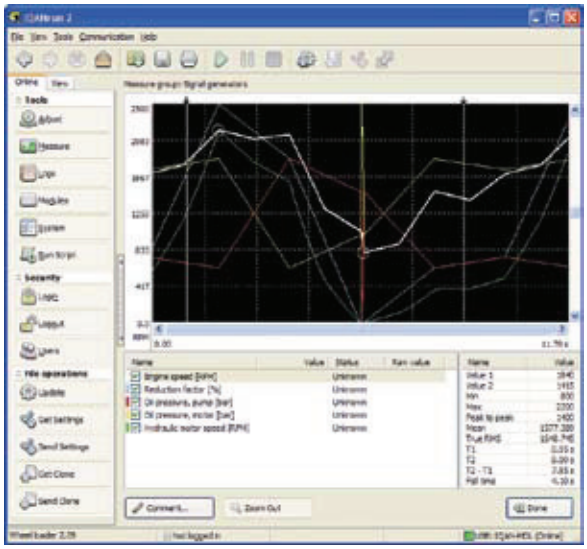
Machine optimization

To help optimize your machines, IQANrun has functions for adjusting inputs, outputs and parameters. There is also a settings viewer that gives a good overview of the complete machine setup.

Troubleshooting

IQANrun is a powerful troubleshooting tool. It has several measuring functions built-in, both numerical and graphical. You can measure scaled value, raw value (mV, mA, etc) and status.

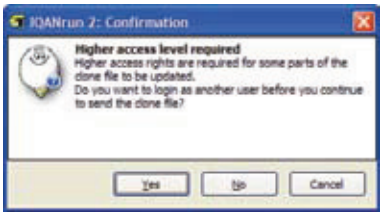
Features include an application viewer, log management and system status screens. There is even a function that lets you compare the settings of two machines, value by value, to help you find differences.



IQANrun graphical measure.

Security

IQANrun comes with full support for all security functions built into IQAN. It allows you to login to your machines and to give access to functions and parameters that are protected by the application.


IQANrun 2: Confirmation
Higher access level required
Higher access rights are required for some parts of the clone file to be updated.
Do you want to login as another user before you continue to send the clone file?
Yes
No
Cancel

IQANrun security message.

Customization

IQANrun can be customized to create a user friendly interface that fits the end user's needs perfectly. It is possible to embed documents of all kinds, images and videos. Links can be added to external web sites or other programs installed on the same computer.

The customized user interface can easily be updated by the click of a single menu item – Check For Updates. This will search for updated pages and documents on the OEM's web site, download and install them on the local computer.

Scripts

Script execution is a useful feature in IQANrun. It allows you to run automated procedures for production, service or troubleshooting.

IQANsimulate

IQANsimulate software is a simulation tool that can be used together with IQANrun to do desktop support or class room trainings. It simulates a complete IQAN system without the need for any hardware.

Support call center

By the use of clone files you can receive an exact copy of your client's machine with application, settings and logs. The clone file can be used by IQANsimulate to do an exact simulation of that machine. This will allow call center personnel to do phone support without the need for any IQAN hardware.

Training/education

IQANsimulate offers an exact copy of the master module display and its user interface, which makes it an excellent tool for class room training. Running it on a large screen will allow you to present display pages and menu system for a large group of students.

Ordering part numbers

20073643
IQAN Creative Studio

20073644
IQAN Productive Studio

20073642
IQAN Active Studio

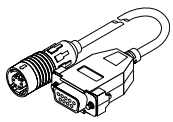
Operating system requirements

Windows® 2000, XP or Vista (XP or Vista recommended).

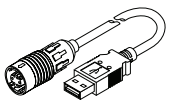
IQAN Software Studios are delivered on CD-ROM. Printed user manuals and cables are not included. Order the accessories you need from the list below.

Accessories

5030103
RS-232 cable: 1,5 meters, fits to IQAN-MDL (for PC connection to IQANdesign and IQANrun)

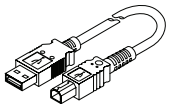


5030110
USB cable: 1,5 meters, fits to IQAN-MDL (for PC connection to IQANdesign and IQANrun)



5030124
Panel mount USB adapter cable: 1 meter, fits to IQAN-MC2, IQAN-MD3

From a retail store
USB A-B cable: 1,5 meters, fits to 5030124 (for PC connection to IQANdesign and IQANrun)



HY17-8396/UK
IQAN Creative Studio
User Manual

HY17-8397/UK
IQAN Productive Studio
User Manual

HY17-8398/UK
IQAN Active Studio
User Manual

Please order printed manuals from Parker Catalogue Services.

⚠ WARNING

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HYGE Ed. 2008-02-25

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Catalogue HY17-8399/UK. POD 03/2008

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